



IOWA STEM UPDATE

A monthly newsletter from the Iowa Governor's STEM Advisory Council

Lt. Gov. Rallies Girls on National Stage



The Honorable Lt. Governor Kim Reynolds, Co-Chair of the Gov.'s STEM Advisory Council.

"Let's get [girls] fired up and passionate about taking on STEM careers!" was the culmination of Lt. Gov. Kim Reynolds' remarks on the recent "Women and Girls in STEM" webinar hosted by STEMconnector™ in celebration of Women's History Month. The organization used this opportunity to announce a national, multi-year campaign to encourage more girls and women to become engaged in STEM study and careers and to ask Lt. Gov. Reynolds to share Iowa's best practices for mentoring girls and women, encouraging them to take on STEM careers. From Iowa State's first year peer mentoring program for college freshman majoring in STEM disciplines to John Deere's "Introduce a Girl to Engineering Day" held each year at numerous locations around

the state, Lt. Gov. Reynolds enumerated the many ways Iowa is seen as a leader in STEM education around the country. Appointed to STEMconnector's 100 Women Leaders in STEM in 2012, Lt. Gov. Reynolds' passion for STEM is exhibited as co-chair of the Gov.'s STEM Advisory Council. In existence only 18 months and under her leadership, 38,000 children have been directly impacted by the 2012-13 12 STEM Scale-Up programs offered through schools and afterschool programs in all reaches of Iowa, thanks to the Council's efforts. "We must encourage girls and women to pursue more STEM career options...and mentoring can make all the difference," said Lt. Gov. Reynolds. She exemplifies the ways our students can change the future as she changes the future in Iowa through STEM.

STEM Summit II Sets Year Two Tone

Despite a springtime snowstorm that hit Eastern Iowa the morning of the event, over 220 business leaders, educators and Council members turned out for the Gov.'s STEM Advisory Council's Second Annual Iowa STEM Summit on March 5, 2013, at the Iowa Events Center in Des Moines. This day-long working meeting began with Council Co-Chairs Lt. Gov. Kim Reynolds and University of Northern Iowa President Ben Allen welcoming all in attendance. Keynote speaker and author Richard Longworth spoke to the attendees about, "A Midwest and Global Context for Iowa STEM Education." Three separate break-out sessions rounded out the summit, engaging attendees with topics ranging from statewide broadband access and STEM-focused schools to business engagement in STEM to the upcoming Student STEM Film Festival. A special treat was provided by lunch speaker Eric Huinker, Principal of Greenwood Elementary School, Des Moines. He shared a brief video of his interviews with a few of his elementary students who have been impacted by the scale-up program Engineering is Elementary (EiE), one of the 2012-13 STEM Scale-Ups supported by the Gov.'s STEM Advisory Council. Finishing out the day was a Q&A with the Regional STEM Managers. For more information about the summit, including videos of the keynote presentations and other conference materials, please go to <http://tinyurl.com/dyb8985>.



Richard Longworth, senior fellow, Chicago Council on Global Affairs, addresses the crowd at the Iowa STEM Summit II in Des Moines, IA.

Coming Events

(More events listed at www.IowaSTEM.gov)

APR 5	The State Science and Technology Fair of Iowa –Over 400 research projects presented by more than 500 Iowa 6-12 grade students. Time: 9 a.m. – 7 p.m. Location: Hilton Coliseum, ISU, Ames, IA. Contact: Vicki Speake, speake@iastate.edu
APR 7	The Tama County Family STEM Festival –K-6 students & families. Hands-on activities, scientists, music. Time: 1-4 p.m. Location: North Tama County Schools, Traer, IA. Contact: James Hoelscher, James.Hoelscher@uni.edu
APR 9	2013 Prometheus Awards – Hosted by Technology Association of Iowa (TAI). Iowa's largest technology ceremony honors companies and individuals demonstrating outstanding leadership and excellence in technology. Location: Vets Auditorium, Des Moines, IA. Contact: Tamara Kenworthy, tamara@technologyiowa.org
APR 9	Iowa Broadband Summit – State & community leaders, policymakers, industry and economic development professionals address the progress to expand broadband access, adoption and use. Location: Iowa State Historic Center, Des Moines, IA. Contact: Amy Kuhlers, info@connectiowa.org
APR 26-27	FIRST World Championships – Culmination season's FIRST programs: FIRST Robotics Competition Championship, the FIRST Tech Challenge World Championship, the FIRST LEGO League World Festival. Also featured is the Junior FIRST LEGO League World Festival Expo. Location: St. Louis, MO. Contact: Rebecca Whitaker, rebecca-whitaker@uiowa.edu

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Iowa STEM Monitoring System (ISMS): STEM Summit Update



Mari Kemis,
Assistant
Director,
Research Institute
for Studies in
Education (RISE)
at Iowa State
University.

At the STEM Summit, Mari Kemis, Assistant Director of the Research Institute for Studies in Education (RISE) at Iowa State University, shared preliminary findings from the STEM Monitoring System. Not quite a year into the process, preliminary baseline data was shared from these four key areas: the Statewide Student Interest Inventory, the Statewide Survey of Public Attitudes toward STEM, the Iowa STEM Indicators System (ISIS) and the [STEM Scale-Up Programs](#). The monitoring project intends to systematically use a series of metrics and sources to examine changes in STEM education and economic development in Iowa due to the efforts of the Gov.'s STEM Advisory Council. Preliminary results from the Statewide Student Interest Inventory suggest that from grade 6 to grade 12, there is a dramatic decrease in the percent of Iowa students who are interested in STEM subjects. To compare parent and student data, the public survey

indicated that 44 percent of parents of children ages 12-19 said their children showed a lot of interest in STEM subjects. The statewide interest inventory indicated that about one-third of students surveyed were very interested in STEM topics. Iowa students are doing well compared to national averages on standardized tests and the ACT, yet there are disparities among students from underrepresented groups. Iowa educators implementing Scale-Ups report observations of increased awareness and interest in STEM topics and careers among their participants. These are all good signs and more details will be revealed [as data comes in](#).

UPDATES from the Iowa Regional STEM Network

Southwest Region – Regional Managers Beth Kulow and Kris Kilibarda traveled to The Museum of Science in Boston, MA, to become professional development implementers for Engineering is Elementary (EiE), one of the [STEM Scale-Up programs](#) being offered through the Gov.'s STEM Advisory Council. Kulow organized the 2013-2014 Scale-Up Review Committee and is currently working to inform all formal and non-formal educators about the nine exemplary programs selected as [STEM Scale-Up Programs for the upcoming academic year](#). **South Central**



STEM Regional Managers
Beth Kulow and Kris
Kilibarda at EiE training.

Region – Throughout their region, South Central Iowa Regional STEM Manager Kris Kilibarda and Associate Manager Sarah Derry are currently spreading the word about the [nine 2013-14 STEM Scale-Up programs](#). Other activities include creating an on-line interactive STEM calendar of events, judging several STEM competitions and partnering with iExplore STEM Central for a night of family STEM fun on April 2. **Northwest Region** – Kari Webb, Northwest Iowa Regional STEM Manager, is on a presentation "tour" around her region, addressing local civic, education, leadership and economic development groups spreading the STEM message. Topics include the Gov.'s STEM Advisory Council and its role in creating a skilled workforce for Iowa and



STEM Regional Manager Kari
Webb (standing) talks to a
local leadership group about
all things STEM.

the [new 2013-14 STEM Scale-Up programs](#). **Northeast Region** – Northeast Iowa Regional STEM Manager James Hoelscher spent part of February and March preparing for the [iExplore STEM Family Festival at the Northeastern Iowa Community College Wilder Business Center in Calmar](#), on Thursday, March 14. The event was a huge success with over 35 exhibitors and 500 parents, educators, students and community members attending. He's now focusing on the upcoming festivals in Traer on Sunday, April 7, and in Dubuque on Saturday, April 20.

North Central Region – North Central STEM Manager Lynne Campbell has been actively engaged with schools implementing [2012-2013 STEM Scale-Up](#) programs as well as promoting the 2013-14 round of STEM Scale-Up programming. Other STEM-related activities include the Charles City district (working in partnership with NIACC) development of K-12 PEERS-like experiences for their students and NIACC partnered with the North Central STEM Hub to host **Women in STEM Festival**. Approximately 120 people attended the event including 80 girls and 15 women who served as mentors. **Southeast Region** – Regional STEM Manager Rebecca Whitaker represented the Gov.'s STEM Advisory Council at the North Carolina "Scaling STEM" Conference in March with 700 K-12 educators from around the country.



News Briefs

Iowa Featured in Upcoming Webinars

– STEM Advisory Council executive director Jeff Weld will be hosting two national webinars in April. On April 9 at 12:00pm, the National Alliance for Partnerships in Equity (NAPE) has invited Jeff to present "Pathways to STEM Success: Helping Students with College and Career Decisions." To help tell Iowa's story, Jeff will be joined by Mary Lou Erlacher of the Workplace Learning Connection and Meghan Reynolds of Iowa's Real World Externships. Then on April 11, Education Week has invited Jeff to tell Iowa's story on "STEM Education Councils and Networks" alongside California's STEM Learning Network CEO Marcella Klein-Williams. Find links to register for these webinars at www.iowastem.gov.



2013 Real World Externships

Ramping Up – Planning is officially underway for the summer 2013 Real World Externships. For the fifth summer in a row, Real World Externships will provide teachers of mathematics, science and technology the opportunity to work side-by-side with professionals in local businesses and organizations in



or near the community they serve. Externs have worked on a wide array of projects, from analyzing gene stability at Kemin Industries, to testing materials in a metallurgy lab at John Deere, to mathematically reducing the carbon footprint at Rockwell-Collins. Businesses enjoy an improved bottom line thanks to the fresh perspective of a smart, independent and mature contributor.

And learners discover meaning in mathematics or science as applied in great careers across town. Teacher applications are now being accepted for a variety of opportunities located across the state this summer. Application and additional information can be found at www.iowastem.gov/imsep/educators/externships. Businesses interested in partnering in this impactful program should send an inquiry to externships@uni.edu.